KY Dept. for Environmental Protection
Division for Air Quality

Kentucky's 2010 Regional Air Quality Conference on Climate Change/Livability/Air Quality

April 14, 2010

To Protect and Enhance Kentucky's Environment

Kentucky
UNBRIDLED SPIRIT

8-Hour Ozone

- On January 6, 2010, EPA proposed revisions to the National Ambient Air Quality Standards (NAAQS) for ground-level ozone.
- The proposed revisions are based on scientific evidence about ozone and its effects on people and sensitive trees and plants.
- The proposed revisions would affect two types of ozone standards:
  - ***Primary standard*** to protect public health, including the health of at-risk populations such as children, people with asthma, and older adults.
  - ***Secondary standard*** to protect public welfare and the environment, including sensitive vegetation and ecosystems.

8-Hour Ozone

- Specifically, EPA is:
  - Proposing to revise the level of the ***primary*** 8-hour ozone standard to a level within the range of 0.060-0.070 parts per million (ppm).
  - Proposing to establish a separate cumulative ***secondary*** standard within a range of 7-15 ppm-hours.
- EPA is also proposing to update the Air Quality Index (AQI) for ozone.
- EPA plans to issue final standards by August 31, 2010.
- For more information go to http://www.epa.gov/ozonepollution

New 8-Hour Ozone

Expected Schedule

- Proposal signed on January 6, 2010.
- Public comment period for 60 days after proposal is published in Federal Register.
- Public hearings
  - –February 2, 2010 –Arlington, Va., and Houston, Texas.
  - –February 4, 2010 –Sacramento, Calif.
- Final Rule signed by August 31, 2010.
- Final Designations in August 2011.
- State Implementation Plans (SIPs) due December 2013.

8-Hour Ozone Secondary Standard

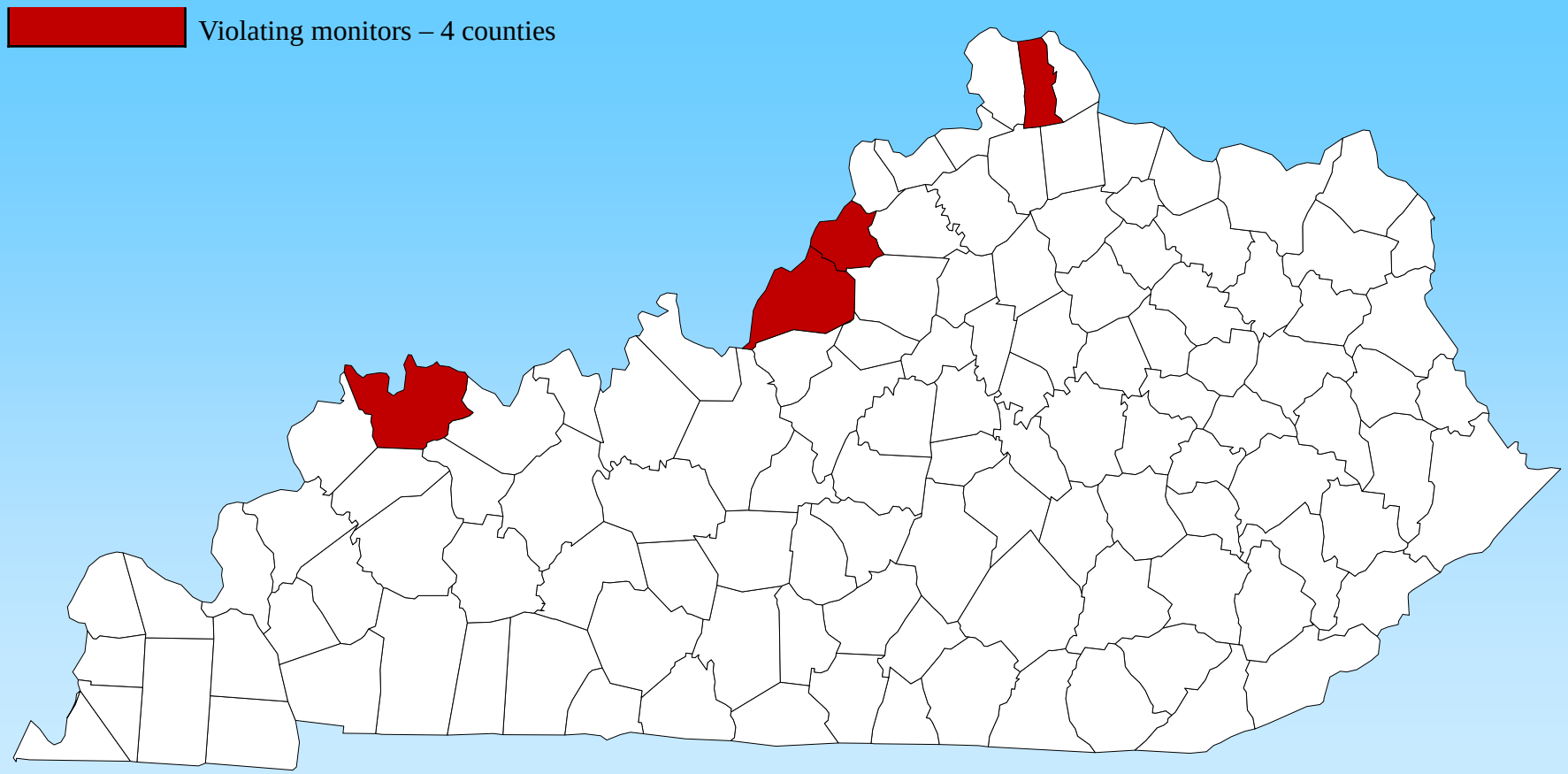
- EPA is proposing to establish a distinct cumulative, seasonal secondary standard at a level in the range of 7-15 ppm-hours.
- This cumulative standard would add weighted hourly ozone concentrations across all days in a three-month period.
- The Administrator proposes that a seasonal secondary standard identical to the primary standard, as was set in 2008, is inadequate to provide the requisite level of protection for vegetation and ecosystems.
- The new secondary standard, also called W126, is designed to account for the cumulative effects of repeated ozone exposures on sensitive vegetation during the three months of the year when ozone concentrations are highest.

2008 8-Hour Ozone

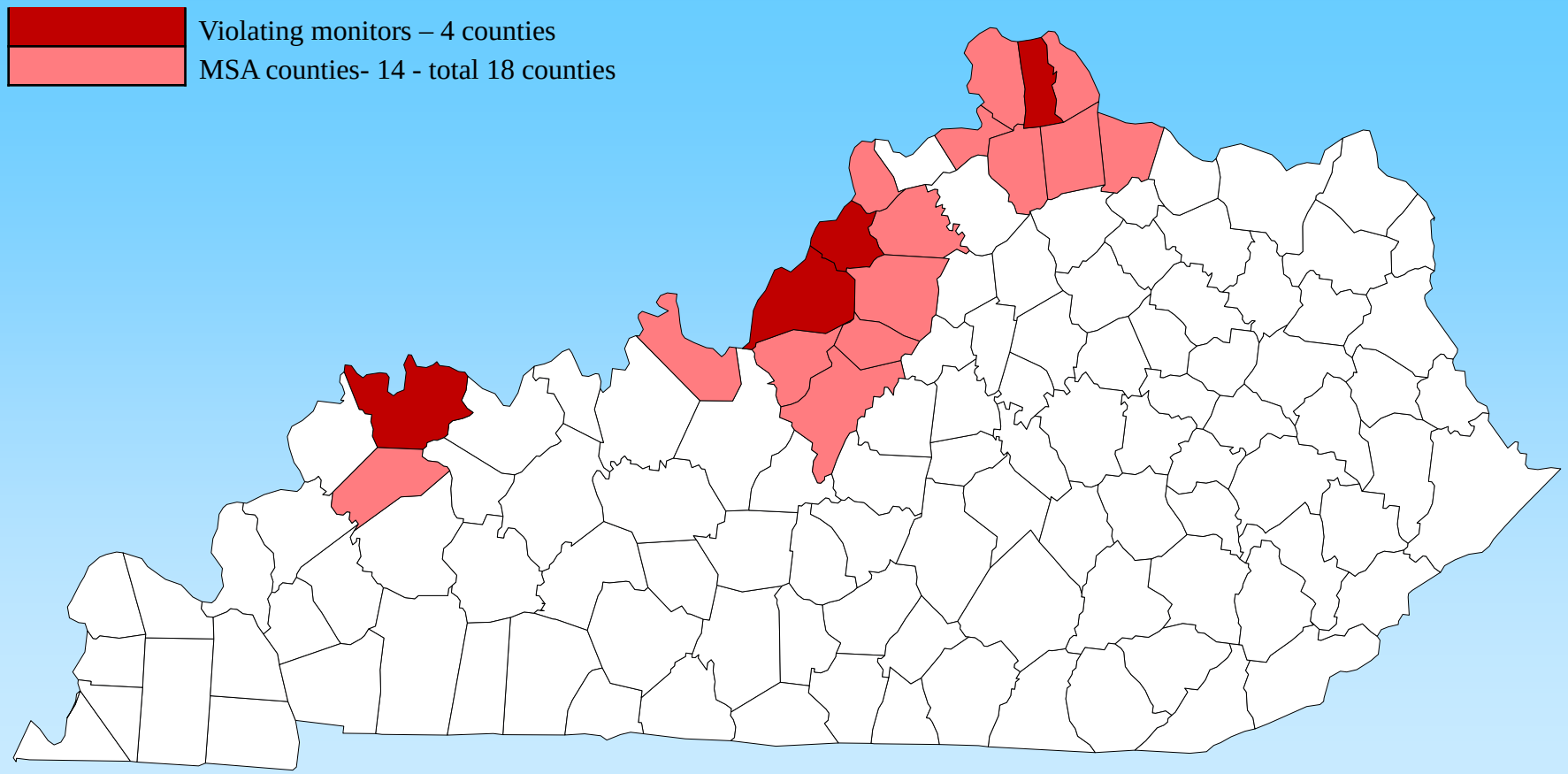
Steps in calculating W126 value for a particular site:

- Measure hourly ozone (O3) concentrations for each hour within the 12 hour daylight period (8am-8pm).
- Assign a weight to each hourly value based on concentration: lower concentrations receive less weight than higher concentrations.
- Sum the 12 weighted hourly values to calculate a daily W126 value.
- Repeat steps 1-3 for each day within the ozone season and then sum the daily values to calculate the monthly W126 value.
- Identify the consecutive 3-month period whose monthly W126 values produce the highest total. This total becomes the seasonal W126 for this site.
- Average three years of maximum W126 values and compare to standard.

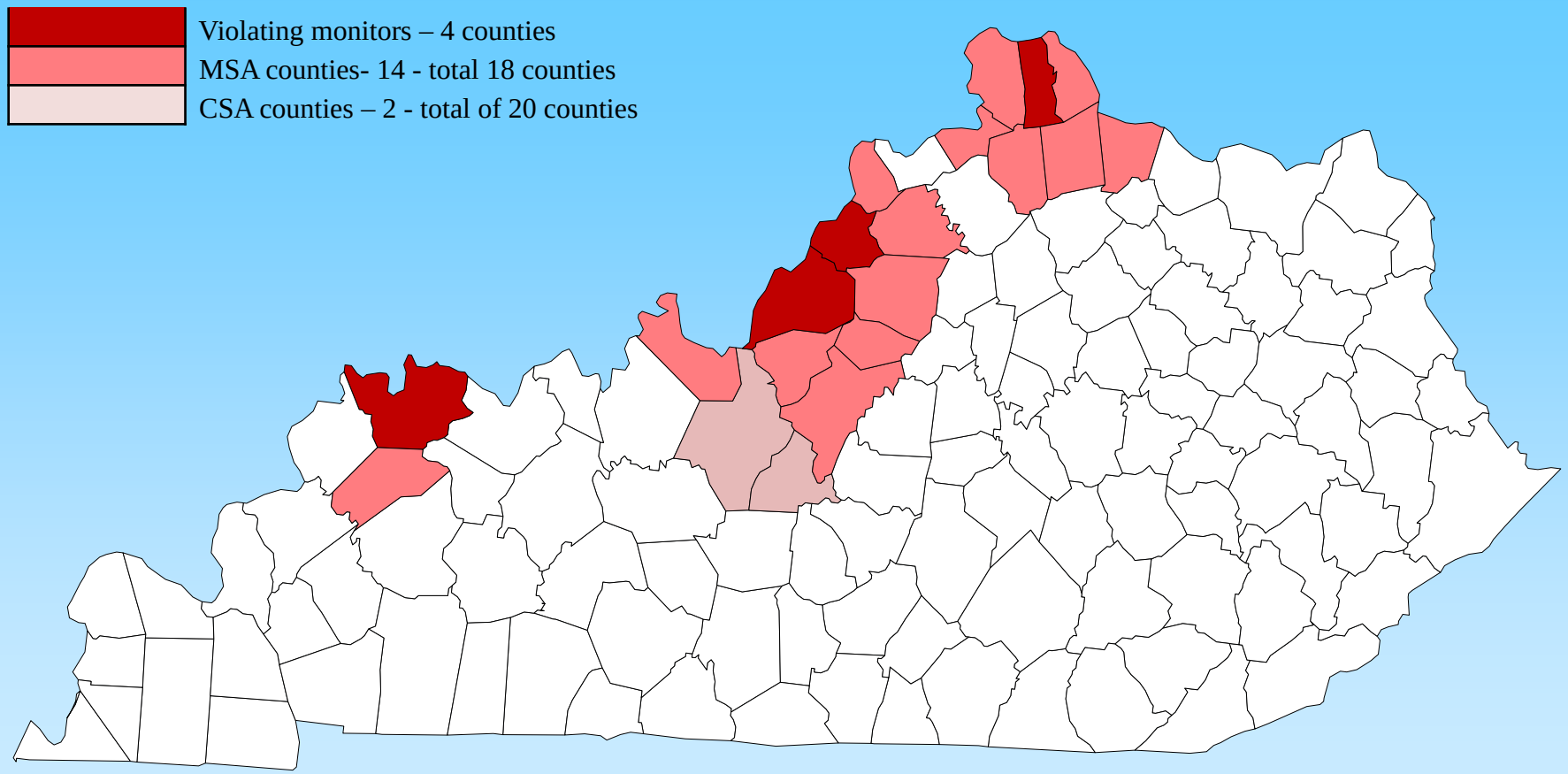
Monitors in violation of 0.075 8-Hour Ozone Counties Only



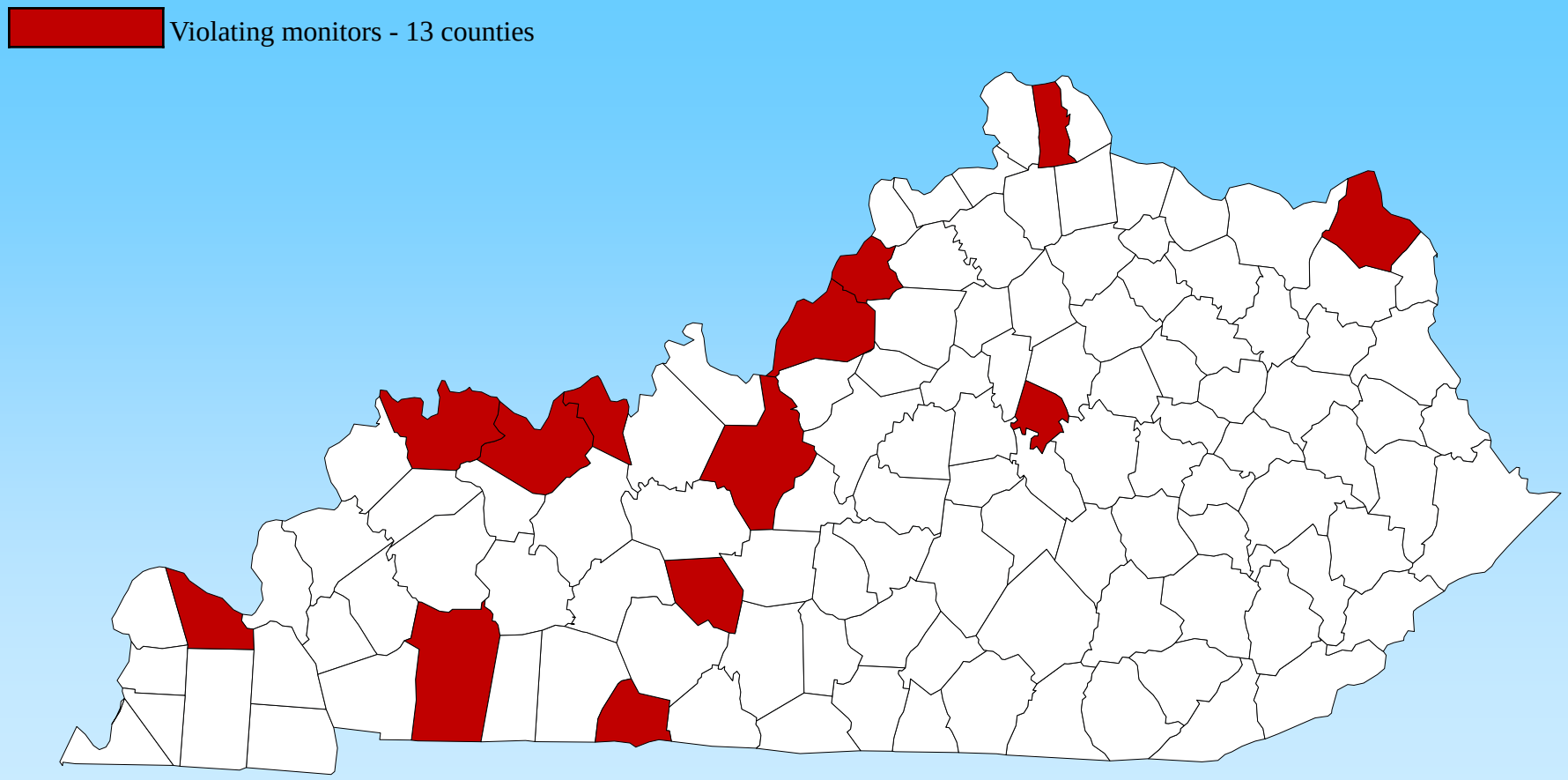
Monitors in violation of 0.075 8-Hour Ozone (MSA)



Monitors in violation of 0.075 8-Hour Ozone (CSA)



Monitors in violation of 0.070 8-Hour Ozone Counties Only



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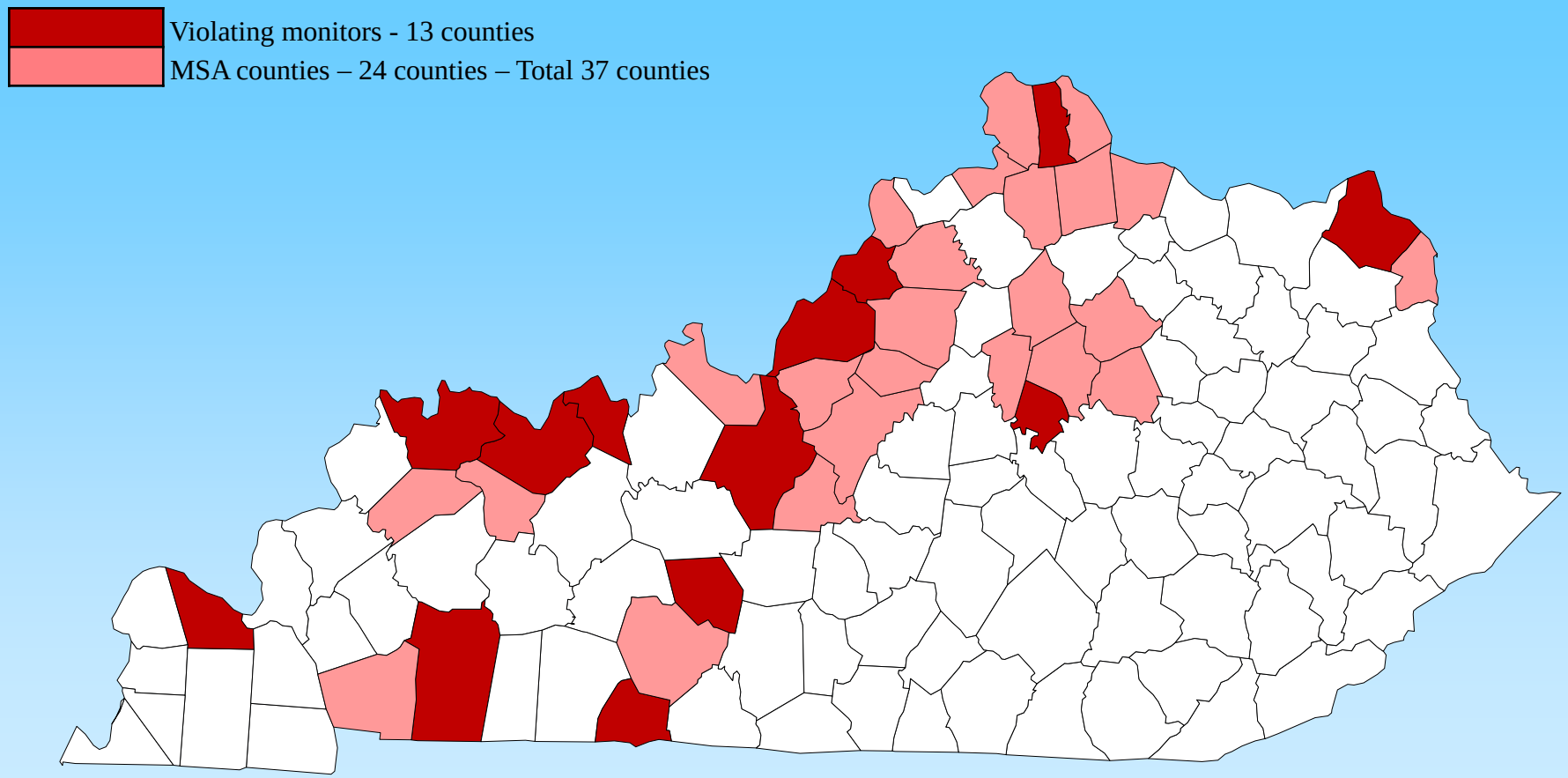
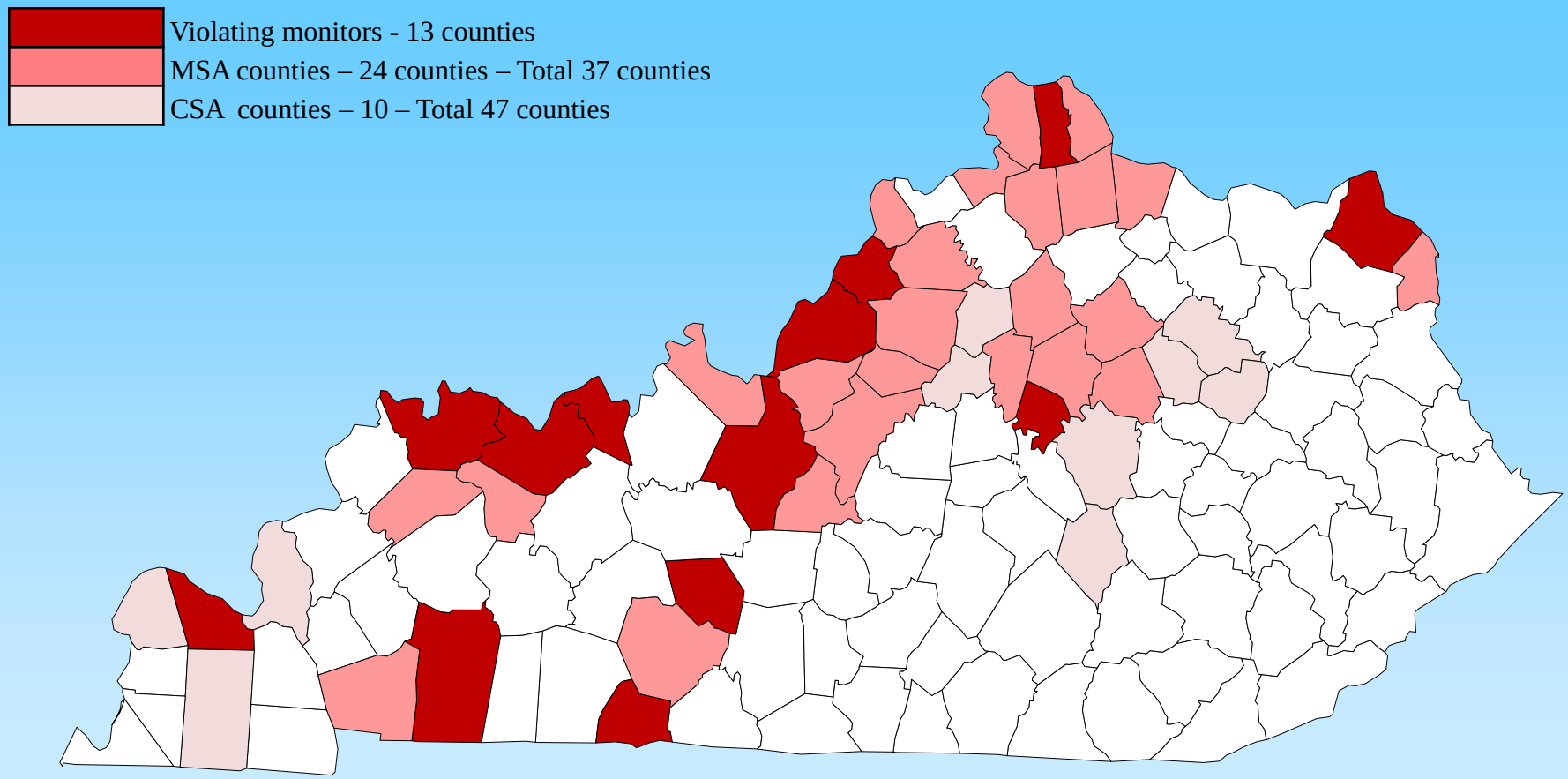
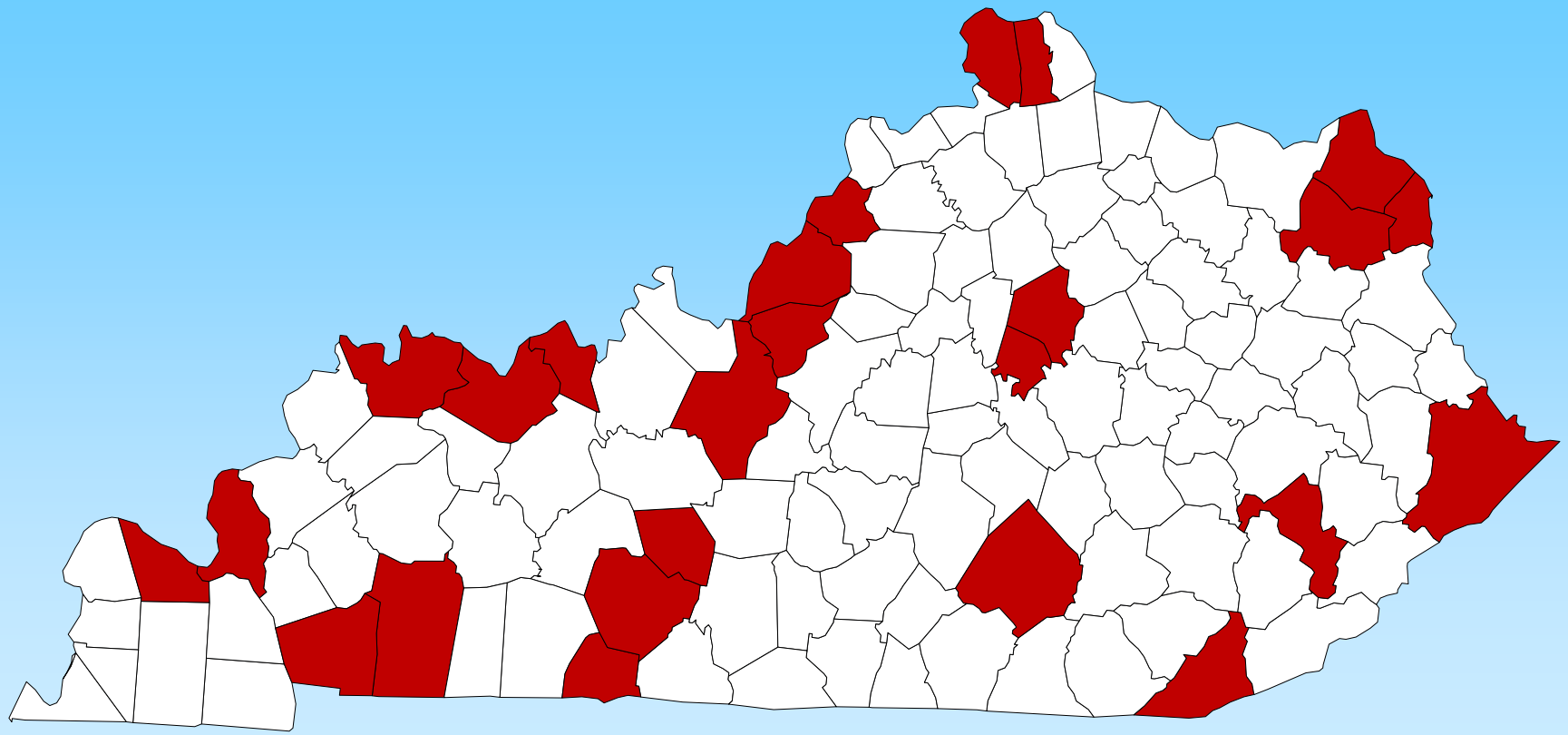


Monitors in violation of 0.070 8-Hour Ozone (CSA)



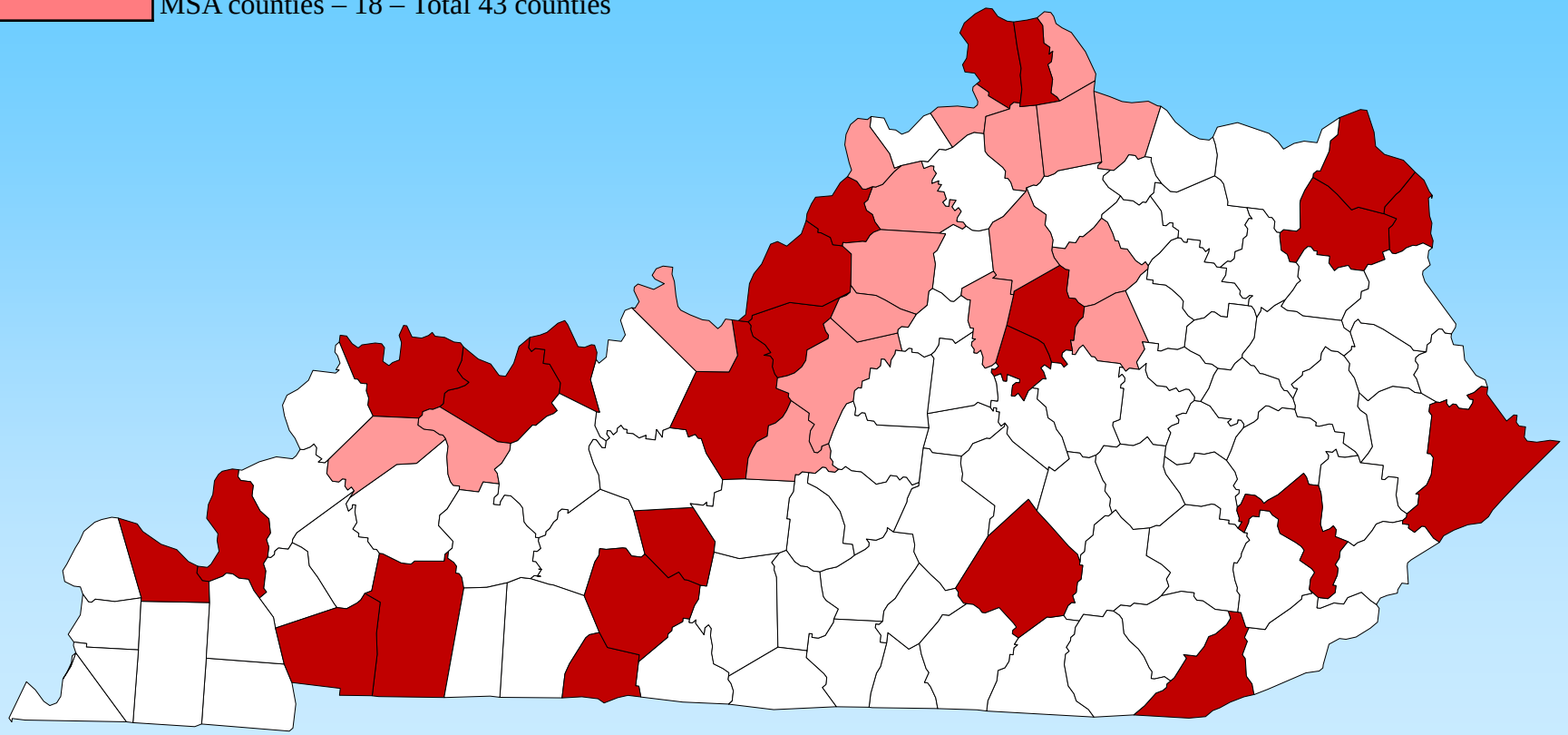
Monitors in violation of 0.065 8-Hour Ozone Counties Only

Violating monitors – 25 counties

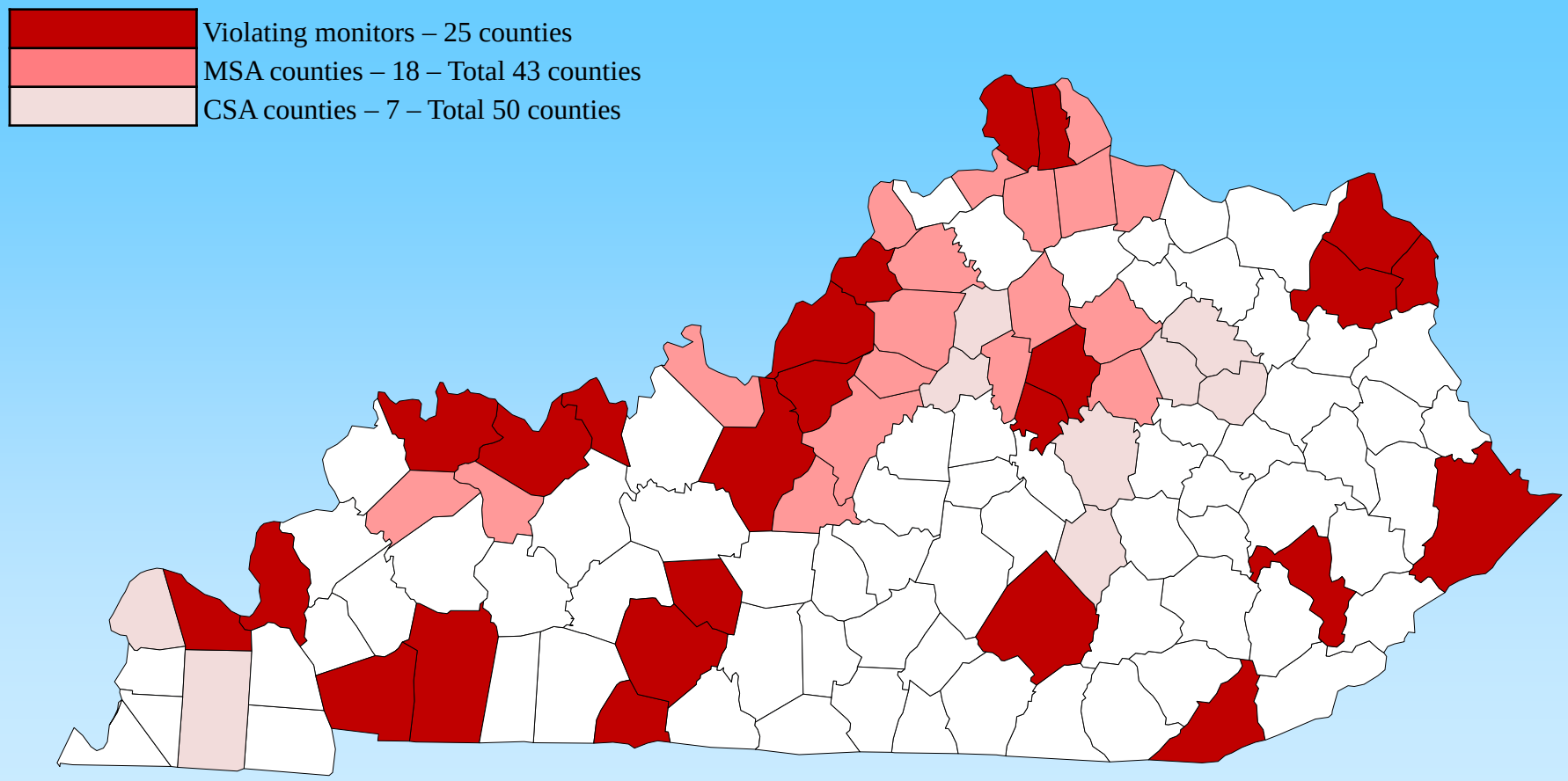


Monitors in violation of 0.065 8-Hour Ozone (MSA)

Violating monitors – 25 counties
MSA counties – 18 – Total 43 counties



Monitors in violation of 0.065 8-Hour Ozone (MSA)



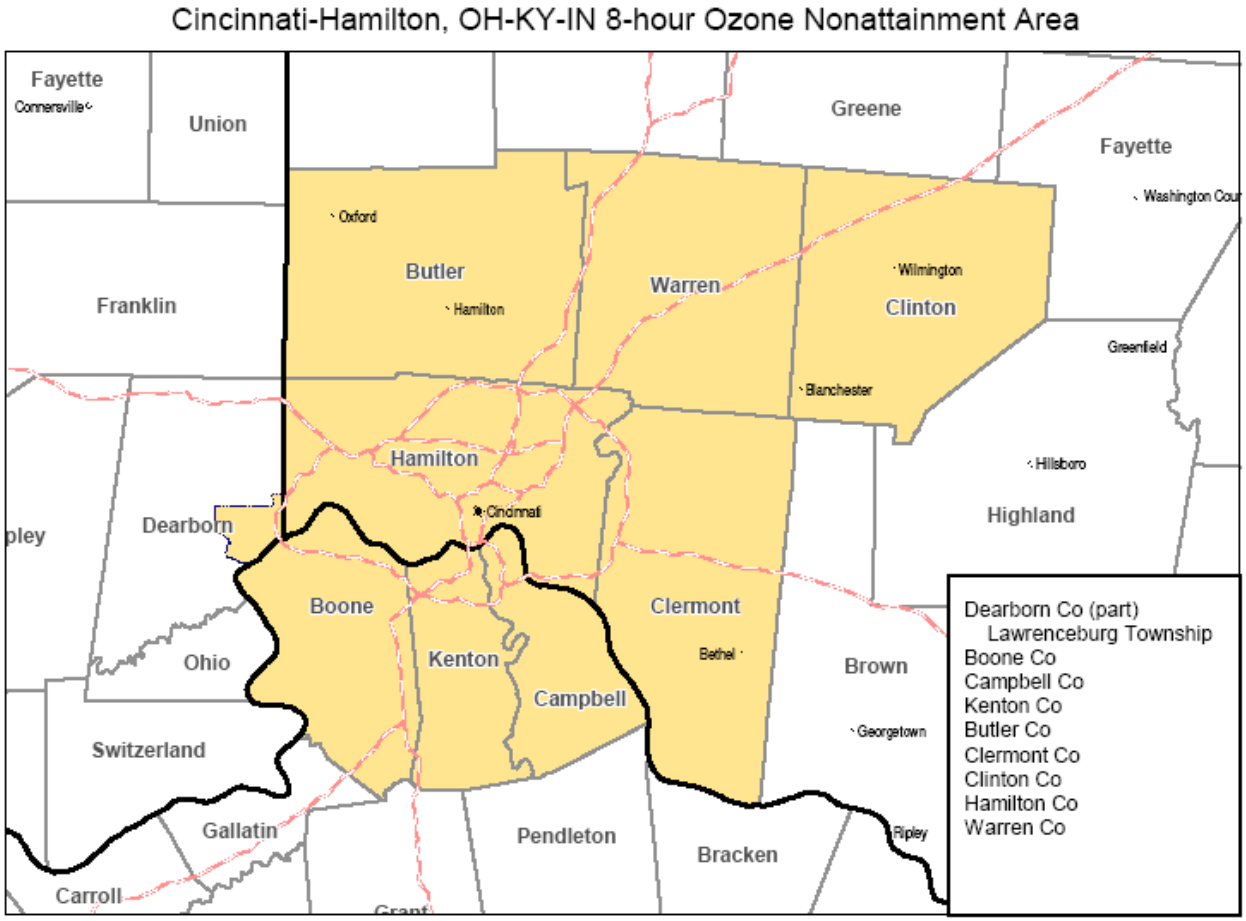
SO_2

- On November 16, 2009 the Environmental Protection Agency (EPA) proposed to revise the National Ambient Air Quality Standard for sulfur dioxide (SO_2).
- EPA is proposing to revise the primary SO_2 standard to a level of between 50 and 100 parts per billion (ppb) measured over 1 hour.
- The existing primary standards were 140 ppb measured over 24-hours, and 30 ppb measured over an entire year.

Lead

- On December 23, 2009 the Environmental Protection Agency (EPA) proposed to revise the ambient monitoring requirements for measuring airborne lead.
- EPA is proposing to change the lead emissions monitoring threshold to 0.50 tons per year (tpy). Air quality monitoring agencies would use this threshold to determine if an air quality monitor is required to be placed near a facility emitting lead. EPA also is requesting comments on alternative emission thresholds. The current emissions threshold is 1.0 tpy.

Cincinnati-Middletown OH-KY-IN 1997 8-hour ozone nonattainment area



Boundaries and locations are for illustrative purposes only. This is not a regulatory document.

Ozone Redesignation Request

- On January 28, 2010, the Division for Air Quality submitted a final request to redesignate the Kentucky portion of the Cincinnati-Middletown OH-KY-IN area to attainment for the 1997 8-hour ozone standard.
- Waiting for approval and publication in the Federal Register.

Questions?

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